

## Research Article

# A cross sectional study on menstrual hygiene of adolescent girls in rural field practice area of Kalaburagi, Karnataka, India

Shweta R. Chapparbandi\*, S. R. Nigudgi

Department of Community Medicine, Mahadevappa Rampure Medical College, Kalaburagi, Karnataka, India

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### \*Correspondence:

Dr. Shweta R. Chapparbandi,  
E-mail: [shwetachapparbandi@gmail.com](mailto:shwetachapparbandi@gmail.com)

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## ABSTRACT

**Background:** Adolescents make nearly one tenth of Indian population and form a crucial segment of the society. A large variety of morbidities such as nutritional deficiency disorders (stunting, wasting), menstrual disorders, etc. prevail among them. Menstruation is generally considered as unclean in the Indian society. Isolation of the menstruating girls and restrictions being imposed on them in the family, have reinforced a negative attitude towards this phenomenon. There is a substantial lacuna in the knowledge about menstruation among adolescent girls. Adolescent girls have incomplete and inaccurate information about the menstrual physiology and hygiene. Good hygienic practices such as the use of sanitary pads and adequate washing of the genital area are essential during menstruation.

**Methods:** A cross-sectional study was carried out from January to December 2012. House to house survey was conducted; a pre-structured and pre-tested questionnaire was administered to all the adolescent girls of 10-19 years in the study area.

**Results:** Majority of girls 121 (38.05%) were in high school; Out of 318 adolescent girls, 200 (62.89%) had attained menarche when they were 13-14 years old; Among 200 girls, majority 138(69%) use piece of cloth and 62 (31%) use sanitary pad as sanitary protection during menstruation. There was a significant association between usage of sanitary protection (cloth/pad) and education of adolescent girls ( $p<0.05$ ).

**Conclusions:** Health education programs regarding menstrual hygiene are necessary in rural areas and social marketing of sanitary napkin should be promoted to avoid use of unhygienic sanitary napkins.

**Keywords:** Adolescent girls, Rural area, Menstrual hygiene

## INTRODUCTION

The entire period of transition from childhood to adulthood is considered as “adolescence”. This critical period of transition is identified by a range of ages. The World Health Organization (WHO) has defined adolescence as the age group of 10-19 years. Adolescent’s problems constitute a bulk of morbidities which are generally unrecognized and uncared furthering the disease burden. A large variety of morbidities such as nutritional deficiency disorders (stunting, wasting),

menstrual disorders, etc. prevail among adolescents. RTIs/STIs/HIV/AIDS have already appeared as serious problems. Teenage pregnancies with complications, unsafe abortions, etc. also exist considerably. Moreover, the complex psycho-social morbidities and high risk behaviour of adolescents have been recognized as a threat to survival, growth and development.<sup>1</sup>

Menstruation and menstrual practices are still clouded by taboos and socio-cultural restrictions resulting in adolescent girls remaining ignorant of the scientific facts

and hygienic health practices, which sometimes result into adverse health outcomes. Menstruation is a phenomenon unique to the females. The onset of menstruation is one of the most important changes occurring among the girls during the adolescent years. The first menstruation (menarche) occurs between 11 and 15 years with a mean of 13 years. Adolescent girls constitute a vulnerable group, particularly in India where female child is neglected one. Menstruation is still regarded as something unclean or dirty in Indian society. The reaction to menstruation depends upon awareness and knowledge about the subject. The manner in which a girl learns about menstruation and its associated changes may have an impact on her response to the event of menarche. Although menstruation is a natural process, it is linked with several misconceptions and practices, which sometimes result into adverse health outcomes.<sup>2</sup>

## METHODS

### Study area

This study was carried in rural field practice area Hebbal of Department of Community Medicine, M. R. Medical College, Gulbarga, Karnataka, India.

### Study population

The study population includes all adolescent girls aged 10 – 19 yrs.

### Study design

The study was cross-sectional study.

### Study duration

This study is carried out from January 2012 to December 2012.

### Sample size

The population of rural field practice area - Hebbal is 3,155 and population of adolescent girls is 9.9%.<sup>3</sup>

$$\text{Sample size (9.9\% of total population)} = 9.9 \times 3155 \\ = 312.34 = 100$$

So approximately = 312 sample

### Inclusion criteria

All adolescent girls (married and unmarried)

### Exclusion criteria

Women other than adolescent girls, adolescent girls who are unwilling to participate in the study.

## Data collection

A house to house visit was made and all adolescent girls aged 10-19 years were studied.

## Data analysis

The statistical tests used are percentages and chi-square test. The statistical software SPSS 12 is used for the analysis of the data.

## RESULTS

Table 1 shows that majority of girls 121 (38.05%) were in high school, followed by 91 (28.62%) were in middle school, 71 (22.33%) were in college, 23 (7.23%) are in primary school and least 12 (3.77%) were illiterate.

**Table 1: Distribution of adolescent girls according to their level of education.**

Education	Adolescent girls	
	Number	Percentage
Illiterate	12	3.77
Primary school	23	7.23
Middle school	91	28.62
High school	121	38.05
College	71	22.33
Total	318	100.00

Table 2 shows that out of 200 adolescent girls who have attained menarche, majority of them 117 (58.50%) are in the age group 13-14 years, followed by 49 (24.50%) adolescent girls were 11-12 years and least 34 (17%) have attained menarche after the age of 15 years.

**Table 2: Distribution of adolescent girls according to age at menarche.**

Age of menarche	Adolescent girls	
	Number	Percentage
11-12	49	24.50
13-14	117	58.50
>15	34	17.00
Total	200	100.00

Table 3 shows that out of 200 adolescent girls, majority 138 (69%) use piece of cloth and 62 (31%) use sanitary pad as sanitary protection during menstruation.

Table 4 shows that out of 138 adolescent girls who use piece of cloth during menstruation, majority 133 (96.38%) of them use soap/detergent whereas about 5 (3.62%) use only water for cleaning the cloth during menstruation.

Table 5 shows that out of 138 adolescent girls who use piece of cloth during menstruation, majority 74 (53.62%)

of them dry in open sunlight and 64 (46.38%) dry in hidden place/inside house.

**Table 3: Distribution of adolescent girls regarding the use of sanitary protection during menstruation.**

Sanitary protection	Adolescent girls	
	Number	Percentage
Sanitary pad	62	31.00
Piece of cloth	138	69.00
<b>Total</b>	<b>200</b>	<b>100.00</b>

**Table 4: Distribution of adolescent girls regarding the material used for cleaning cloth.**

Cleaning agent	Adolescent girls	
	Number	Percentage
Soap/Detergent	133	96.38
Only water	5	3.62
<b>Total</b>	<b>138</b>	<b>100.00</b>

Table 6 shows that out of 200 adolescent girls, 125 (62.5%) have no knowledge about cleaning external

genitalia and 75 (37.5%) had knowledge about cleaning external genitalia.

**Table 5: Distribution of adolescent girls in regarding the place used for drying of cloth.**

Place	Adolescent girls	
	Number	Percentage
Sunlight	64	46.38
Hidden place/inside house	74	53.62
<b>Total</b>	<b>138</b>	<b>100.00</b>

**Table 6: Distribution of adolescent girls with respect to their knowledge regarding cleaning external genitalia.**

Knowledge	Adolescent girls	
	Number	Percentage
Yes	75	37.50
No	125	62.50
<b>Total</b>	<b>200</b>	<b>100.00</b>

**Table 7: Association between usage of sanitary protection & education of adolescent girl**

Education of girl	Sanitary protection				Total	
	Cloth		Pad		No	%
	No	%	No	%		
Illiterate	11	91.67	1	8.33	12	100
Primary	10	83.33	2	16.67	12	100
Middle	10	62.50	6	37.50	16	100
High school	67	75.28	22	24.72	89	100
College	40	56.34	31	43.66	71	100
<b>Total</b>	<b>138</b>	<b>69</b>	<b>62</b>	<b>31</b>	<b>200</b>	<b>100</b>

Chi-square= 10.16;  $p < 0.05$  (significant).

Table 7 shows that majority of the illiterate girls use cloth as sanitary protection 11 (91.67%) and least 40 (56.34%) were in college whereas 31 (43.66%) were using pad as sanitary protection and least 1 (8.33%) were illiterate. There is significant association between usage of sanitary protection and education of adolescent girls ( $p < 0.05$ ).

## DISCUSSION

The present study revealed that majority of adolescent girls 121(38.05%) were in high school, followed by 91 (28.62%) were in middle school, 71 (22.33%) were in college, 23 (7.23%) are in primary school and least 12 (3.77%) were illiterate. Similarly a study done by KM Susmitha et al on morbidity pattern among the adolescent girls in Nellore (A. P.) in 2012 revealed that 35.79% were in middle school, 56% in high school and 8.1% in college education.<sup>4</sup>

The present study revealed that out of 318 adolescent girls, 200 (62.89%) had attained menarche and 118 (37.11%) had not yet attained menarche. Similarly a study done by Jogdand K et al on menstrual hygiene in Guntur revealed that out of total 360 adolescent girls, 257 (71.39%) girls have attained menarche which is similar to our study.<sup>5</sup>

The present study revealed that out of 200 adolescent girls, majority 138 (69%) use piece of cloth and 62 (31%) use sanitary pad as sanitary protection during menstruation. Similarly a study done by Adika, VO et al on adolescent girls in Bayelsa State, Nigeria found that 64.3% of the girls used sanitary pads.<sup>6</sup>

The present study revealed that out of 138 adolescent girls who use piece of cloth during menstruation, majority 133 (96.38%) of them use Soap/Detergent whereas about 5 (3.62%) use only water for cleaning the cloth during menstruation. Similarly a study done by A

Dasgupta et al on menstrual hygiene in Singur, West Bengal revealed that for cleaning purpose, 156 (97.5%) girls used both soap and water which is similar to our study.<sup>2</sup>

The present study reveals that out of 138 adolescent girls who use piece of cloth during menstruation, majority 74 (53.62%) of them dry in open sunlight and 64 (46.38%) dry in hidden place/inside house. A similar study done by Thakre SB et al on menstrual hygiene in Saoner, Nagpur District revealed that drying of cloth, outside the house in sunlight in 78 (51.32%) girls, 72 (47.37%) dried them inside the house and, 8(4.94%) subjects dried them outside without sunlight which is similar to our study.<sup>7</sup>

The present study revealed that out of 200 adolescent girls, 125 (62.5%) have no knowledge about cleaning external genitalia and 75 (37.5%) had knowledge about cleaning external genitalia. Similarly a study done by Thakre SB et al on menstrual hygiene in Saoner, Nagpur District revealed that cleaning of the external genitalia was unsatisfactory in 79.45% of the rural girls.<sup>7</sup>

The present study reveals that majority of the illiterate girls use cloth as sanitary protection 11 (91.67%) and least 40 (56.34%) were in college whereas 31 (43.66%) were using pad as sanitary protection and least 1 (8.33%) were illiterate. There is significant association between usage of sanitary protection and education of adolescent girls ( $p < 0.05$ ). Similarly Prateek S et al has done a study on adolescent girls in Mumbai found that education status was found to be significantly associated with knowledge of adolescents regarding menstruation.<sup>8</sup>

## CONCLUSION

Even though the majority of the study population was constituted by literates, there are still lacunae existing among them regarding the satisfactory methods of practices in connection with the very physiologic processes of life such as menstruation. Majority of the rural girls are using a piece of cloth as a method of sanitary protection. Though the method of cleaning the cloth was by soap/detergent by most of them, nearly half of them select hidden places in the house to dry it. Such practices may predispose them to acquire infections. Majority of the girls were ignorant about the importance of keeping the external genitalia clean during menstrual flow. Level of education has played a significant role in deciding the best material (sanitary pads) to be used during menstrual flow.

Designing and implementing health educational programs about menstrual hygiene are necessities and the replications of the same program among elementary, preparatory and other secondary schools are important for improvement of student's menstrual knowledge, attitudes and practice. Social marketing of sanitary napkin should be promoted to avoid use of unhygienic sanitary napkins which is quite prevalent in rural areas. Health workers

should receive regular in-service training in order to be able to provide a detailed contraceptive service and contraceptive counselling.

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